

TOWARD SUSTAINABLE ECOLOGICAL SYSTEMS: LESSONS FROM CANADA AND UKRAINE

Svitlana Abu Deeb

EPt (ECO Canada), Canada

anaabudeeb@gmail.com

Canada and Ukraine share extensive agricultural landscapes, wetlands, and forest ecosystems that play a vital role in biodiversity conservation, water regulation, and climate mitigation. Despite differing governance frameworks and economic contexts, both nations face similar challenges: nutrient loading, peatland degradation, and the need for nature-based climate solutions. This research develops a comparative framework assessing institutions, policies, and practices that shape ecological outcomes. Case studies - Lake Winnipeg versus Dnipro Basin, Prairie Pothole wetlands versus Polissya peatlands - illustrate the importance of integrated watershed management, community-based restoration, and performance-based agri-environment schemes. Lessons emphasize Indigenous and local stewardship, payment for ecosystem services, transparent environmental data systems, and high-integrity restoration financing. Findings provide policy insights for sustainable ecological governance and nature-positive reconstruction in Canada and Ukraine.

REFERENCES

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RESCUE ECOLOGY: SCIENCE IN THE SERVICE OF SURVIVAL

Yuliia Yuvkovetska

State University of Trade and Economics, Ukraine

k.yuwwkowitzkaya@gmail.com

Rescue ecology has emerged as a crucial interdisciplinary field that integrates scientific knowledge with practical actions aimed at preserving the planet's life-support systems. It emphasizes the need for urgent responses to environmental degradation, biodiversity loss, and the accelerating consequences of climate change. The main goal of rescue ecology is not only to understand the functioning of ecosystems but also to develop strategies that enable their recovery and sustainable coexistence with human society.

This scientific approach views nature as a complex, dynamic network in which every element plays a vital role. By combining insights from biology, geography, sociology, and economics, rescue ecology seeks to identify the most efficient methods of restoring damaged habitats and protecting endangered species. It also promotes the inclusion of local communities in decision-making processes, acknowledging that ecological resilience depends on cultural and ethical awareness as much as on technological innovation.

Rescue ecology highlights the importance of integrating scientific research with public education, emphasizing the moral responsibility of humankind to protect the biosphere. Through collaboration between scientists, policymakers, educators, and citizens, it is possible to transform the current environmental crisis into an opportunity for global renewal. The science of survival is therefore not only about saving ecosystems, but about redefining the relationship between humanity and the natural world in the 21st century.

In conclusion, rescue ecology represents a vital shift in how we approach the environmental challenges of our time. By uniting scientific understanding with ethical responsibility and community engagement, it offers practical pathways to restore ecosystems and protect biodiversity. More than a scientific discipline, it is a call to action — urging humanity to reshape its relationship with the natural world and take collective responsibility for the planet's future.